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A NEW CRETACEOUS BAUHINIA*

BY EDWARD W. BERRY

The genus *Bauhinia* Linné of the Caesalpiniaceae has upwards of one hundred and fifty species in the modern flora with representatives in the tropics of America, Asia, Africa, and Australia. A fossil species based on leaf remains from the Tortonian or Upper Miocene deposits of Oeningen, Baden, was described by Heer as long ago as 1859.† Soon afterward Unger in his *Sylloge plantarum fossilium* described two additional species,‡ both based on pods, from Croatia. The discovery of a handsome species in the much older Cretaceous deposits of New Jersey was made the occasion of an interesting communication to the Torrey Botanical Club by Professor Newberry in 1886 § and this and another larger species were subsequently fully described and illustrated in his monograph of the Amboy clay flora. || Meanwhile Unger had described a species from the Aquitanian of Kumi on the island of Euboea off the eastern coast of Greece ¶ and Velenovsky had described a leaf from the Cenomanian of Bohemia under the name of *Phyllites bipartitus*** which he considered as a probably abnormal leaf of *Hedera primordialis* Saporta but which as Newberry suggested is almost certainly another species of *Bauhinia* (*l. c.* 1896), and more closely related to the existing oriental species than to those of America.

Quite recently the writer discovered Newberry's *Bauhinia cretacea* in collections from the Tuscaloosa formation of Alabama, and from higher levels in the same formation a large and ornate leaf of a new species belonging to this genus.

The occasion for this brief note, however, is the discovery of

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† Heer, Fl. Tert. Helv. 3 : 109. *pl.* 134. *f.* 21. 1859.

‡ Unger, Sylloge 2 : 31. *pl.* 11. *f.* 2, 3. 1862.

§ Newberry, Bull. Torrey Club 13 : 77, 78. *pl.* 56. 1886.

|| Newberry, Mon. U. S. Geol. Surv. 26 : 91, 93. *pl.* 20. *f.* 1; *pl.* 43. *f.* 1-4; *pl.* 44. *f.* 1-3. 1896.

¶ Unger, Foss. Fl. v. Kumi, 61. *pl.* 15. *f.* 36. 1867.

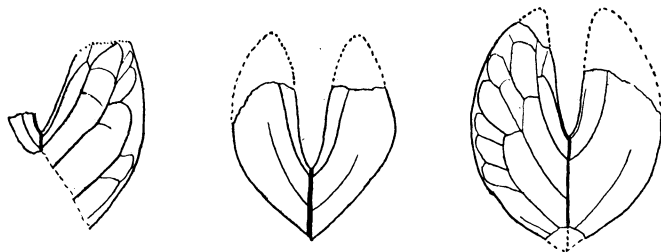
** Velenovsky, Fl. boh. Kreidef. 4 : 12. *pl.* 6. *f.* 4. 1885.

a very distinct smaller-leaved species in the Magothy formation at Grove Point, Maryland. This may be characterized as follows :

***Bauhinia marylandica* sp. nov.**

Leaves small, about 3 cm. in greatest length by 2.5 cm. in greatest breadth, elliptical in general outline, bilobate ; the apical sinus narrow and pointed, reaching one-half to two-thirds of the distance to the base ; lobes narrow, ascending, somewhat falcate in outline, obtusely pointed ; midrib straight, giving off one, two, or three sharply ascending pairs of opposite, camptodrome secondaries, which give off a series of broadly rounded inequilateral tertiary arches which are directed upward and outward ; the upper pair of secondaries the most prominent ; from the juncture of the midrib and sinus a pair of much reduced secondaries is given off and these join the secondary next below in one or two broad arches.

The form and venation of these leaves is exactly like several of the existing forms and is so well marked that there can be no doubt of the existence of a species of *Bauhinia* growing along



the coast of Maryland during the deposition of the Magothy formation, a species whose descendants along with those of its Cretaceous congeners migrated finally to their present tropical habitat, perhaps gradually with the oscillation of climatic conditions, and perhaps not until the Pleistocene glaciation to the northward forced them to make a comparatively sudden retreat to the southward.

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